

## WHAT IS CLAIMED IS:

1. User interactive apparatus for conducting a search of a data base containing data for a universe of financial instruments, said search including the performance of  $n$  filter passes of said data for said universe, said apparatus comprising:

a computer system including a processor, a memory, an access means, a viewing screen, a computer input means and a financial instrument search means, said financial instrument search means configuring said processor to operate said memory, said access means and said viewing screen to conduct said search of said data base in response to user operation of said computer input means, wherein prior to an  $i^{\text{th}}$  filter pass, a plurality of filter criteria for said financial instruments are presented on said viewing screen for user selection of at least one of said criteria as a proposed filter condition by operation of said computer input means, where  $i$  is an integer from 1 and  $n$ , and wherein a histogram for said selected proposed filter condition is presented on said viewing screen, said histogram showing the population of said financial instruments in different frequency of occurrence categories for said proposed filter condition as an aid to the user for selecting one or more of said filter criteria for said  $i^{\text{th}}$  filter pass.

2. The apparatus according to claim 1, wherein said filter criteria include a plurality of investment parameters, there being a different histogram for each investment parameter, said investment parameters being selectable by user operation of said computer input means for selecting said histogram for presentation on said viewing screen.

3. The apparatus according to claim 2, wherein said plurality of filter criteria further includes a plurality of parameter limiters that are presented on said viewing screen.

4. The apparatus according to claim 3, wherein said plurality of parameter limiters includes two or more mathematical operators selected from the group that includes equality, inequality, equal to or greater than, equal to or less than, and not equal to.

5. The apparatus according to claim 4 wherein a filter pass run activator is presented on said viewing screen, said filter run activator being user operable to cause said processor, memory and access means to execute said ith filter pass.

6. The apparatus according to claim 5, wherein said financial instrument search means includes an investment category filter for filtering said universe of financial instruments by a set of investment categories.

7. The apparatus according to claim 6 wherein an investment category filter activator is presented on said viewing screen, said investment category filter activator being user operable to select an investment category filter pass.

8. The apparatus according to claim 2 wherein said histogram and said plurality of investment parameters are presented simultaneously on said viewing screen.

9. The apparatus according to claim 3 wherein said histogram and said plurality of investment parameters are presented simultaneously on said viewing screen.

10. The apparatus according to claim 9 wherein said histogram, all of said investment parameters and all of said parameter limiters are simultaneously presented on said viewing screen.

11. The apparatus according to claim 10 wherein said viewing screen includes first and second display areas; and

wherein said investment parameters are presented in said first display area and said histogram is presented in said second display area.

12. The apparatus according to claim 11 wherein said parameter limiters are presented in said first display area.

13. The apparatus according to claim 12, wherein said areas are presented in a split screen format.

14. The apparatus according to claim 13 wherein a filter pass run activator is presented in said first display area, said filter run activator being user operable to cause said processor, memory and access means to execute said ith filter pass.

15. The apparatus according to claim 14, wherein said financial instrument search means includes an investment category filter for filtering said universe of financial instruments by a set of investment categories.

16. The apparatus according to claim 15 wherein an investment category filter activator is displayed on said viewing screen, said investment category filter activator being user actuated by user operation of said computer input means to select an investment category filter pass.

17. A method of searching a universe of financial instruments by performing n filter passes of said universe with a computer system having a processor, a memory, an access means, a viewing screen and a computer input means, each said filter pass having a filter condition, said method comprising:

(a) configuring said processor, said memory said viewing screen and said access means to conduct said search;

(b) presenting on said viewing screen a plurality of investment parameters, at least one of said investment parameters being selectable by user operation of said computer input means as a proposed filter condition;

(c) presenting on said viewing screen a histogram showing the population of said financial instruments in different frequency of occurrence categories for said proposed filter condition of an  $i^{\text{th}}$  one of said filter passes, where i is an integer from 1 to n, said proposed filter condition including (a) at least one investment parameter selected by user operation of said computer input means and (b) all filter conditions for previously performed ones of said filter passes;

(d) executing said proposed filter pass in response to a run command generated by user operation of said computer input means; and

(e) repeating the foregoing operations (b), (c) and (d) until the  $n^{\text{th}}$  filter pass has been performed.

18. The method according to claim 17 and further including;

presenting on said viewing screen a parameter limiter, said parameter limiter being user selectable to limit a

selected investment parameter in forming said proposed filter condition.

19. The method according to claim 18 wherein said parameter limiter is one of a plurality of parameter limiters, said plurality of parameter limiters being presented on said viewing screen.

20. The method according to claim 19 wherein said plurality of investment parameters and said plurality of parameter limiters are presented in a first area of said screen and said histogram is presented in a second area of said screen.

21. The method according to claim 20 wherein said  $n$  filter passes are combined with an additional filter pass that has filter conditions selected from a plurality of investment categories for said financial instruments.

22. A memory media for controlling a computer system to search a universe of financial instruments by performing  $n$  filter passes of said universe, said computer system having a viewing screen and a computer input means, each said filter pass employing a filter condition that is selected from a plurality of investment parameters for said financial instruments, said memory media comprising:

(a) means for configuring said computer system as a filter means to perform said filter passes;

(b) means for controlling said filter means by presenting on said viewing screen said plurality investment parameters, said investment parameters being selectable by user operation of said computer input means;

(c) means for controlling said filter means by presenting on said viewing screen a histogram showing the

population of said financial instruments in different frequency of occurrence categories for a proposed filter condition of an  $i^{\text{th}}$  one of said filter passes, where  $i$  is an integer from 1 to  $n$ , said proposed filter condition including (i) at least one investment parameter selected by user operation of said computer input means and (ii) all filter conditions for previously performed ones of said filter passes;

(d) means for controlling said filter means by executing said proposed filter pass in response to a run command generated by user operation of said computer input means; and

(e) means for causing means (b), means (c) and means (d) to repeat until the  $n^{\text{th}}$  filter pass has been performed.

23. A memory media according to claim 22 wherein means is provided to present on said viewing screen a parameter limiter, said parameter limiter being user selectable to limit a selected investment parameter in forming said proposed filter condition.

24. The method according to claim 23 wherein said parameter limiter is one of a plurality of parameter limiters, said plurality of parameter limiters being presented on said viewing screen.

25. The computer media according to claim 24 wherein said means (b) presents said plurality of investment parameters and said plurality of parameter limiters in a first area of said viewing screen and said histogram in a second area of said viewing screen.

26. The computer media according to claim 25 wherein said  $n$  filter passes are combined with an additional filter pass

that has a filter condition selected from a plurality of investment categories for said financial instruments.

27. User interactive apparatus for conducting a search of a data base containing data for a universe of financial instruments, said search including the performance of a filter pass of said data for said universe, said apparatus comprising:

a computer system including a processor, a memory, an access means, a viewing screen, a computer input means and a financial instrument search means, said financial instrument search means configuring said processor to operate said memory, said access means and said viewing screen to conduct said search of said data base in response to user operation of said computer input means, wherein a plurality of investment parameters for said financial instruments is presented on said viewing screen for user selection of at least one of said investment parameters as a proposed filter condition by operation of said computer input means, and wherein a histogram for said selected proposed filter condition is presented on said viewing screen, said histogram showing the population of said financial instruments in different frequency of occurrence categories for said proposed filter condition as an aid to the user for selecting one or more of said investment parameters for said filter pass.

28. The apparatus according to claim 1, wherein there is a different histogram for each investment parameter, said investment parameters being selectable by user operation of said computer input means for selecting said histogram for presentation on said viewing screen.

29. The apparatus according to claim 28, wherein a plurality of parameter limiters is presented on said viewing

screen, said parameter limiters being selectable by user operation of said computer input means for selecting one of said parameter limiters to limit a selected investment parameter for said proposed filter condition.

30. The apparatus according to claim 29, wherein said plurality of parameter limiters includes two or more mathematical operators selected from the group that includes equality, inequality, equal to or greater than, equal to or less than, and not equal to.

31. The apparatus according to claim 28 wherein said histogram and said plurality of investment parameters are presented simultaneously on said viewing screen.

32. The apparatus according to claim 31 wherein a first one of said categories for a selected investment parameter is presented as a display element of said histogram;

wherein a number is presented on said viewing screen in association with said display element;

wherein a first limiter activator for a parameter limiter is presented on said viewing screen in association with said number; and

wherein said first limiter activator is user operable to cause said processor, memory and access means to select said parameter limiter and said number, whereby said proposed filter condition is formed by said parameter limiter, said number and said selected investment parameter.

33. The apparatus according to claim 32 wherein said histogram and said selected investment parameter are simultaneously presented on said viewing screen; and



wherein upon user operation of said first actuator, said parameter limiter and said number are presented on said viewing screen in association with said selected investment parameter.

34. The apparatus according to claim 33 wherein said parameter limiter is one of a plurality of parameter limiters, said plurality of parameter limiters being presented on said viewing screen.

35. The apparatus according to claim 34 wherein said viewing screen includes first and second display areas; and

wherein said investment parameters are presented in said first display area and said histogram is presented in said second display area.

36. The apparatus according to claim 35 wherein said parameter limiters are presented in said first display area.

37. The apparatus according to claim 36, wherein said areas are presented in a split screen format.